

CRESTONE PEAK RESOURCES

ARAPAHOE COUNTY

SEC 30-T4S-R64W

WATKINS 4-64 30-29 3AH

OWB

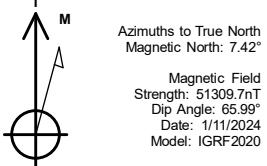
Design: FINAL SURVEY

Standard Survey Report

17 January, 2024

Project: ARAPAHOE COUNTY
Site: SEC 30-T4S-R64W
Well: WATKINS 4-64 30-29 3AH
Wellbore: OWB
Design: FINAL SURVEY

PROJECT DETAILS: ARAPAHOE COUNTY
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
System Datum: Mean Sea Level

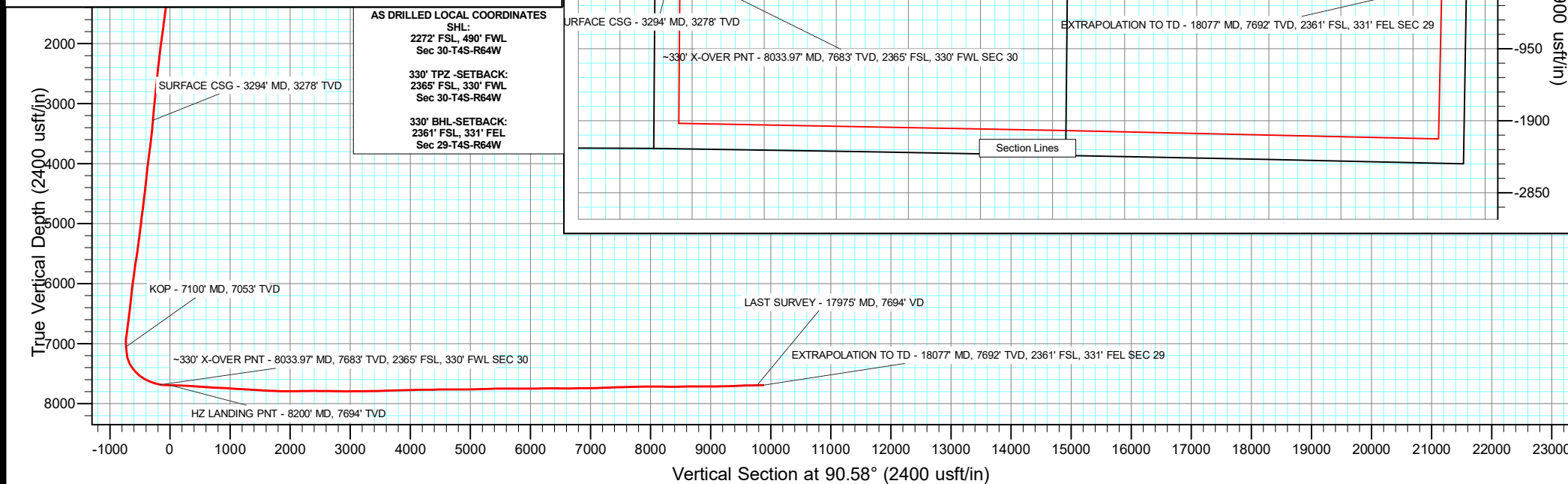
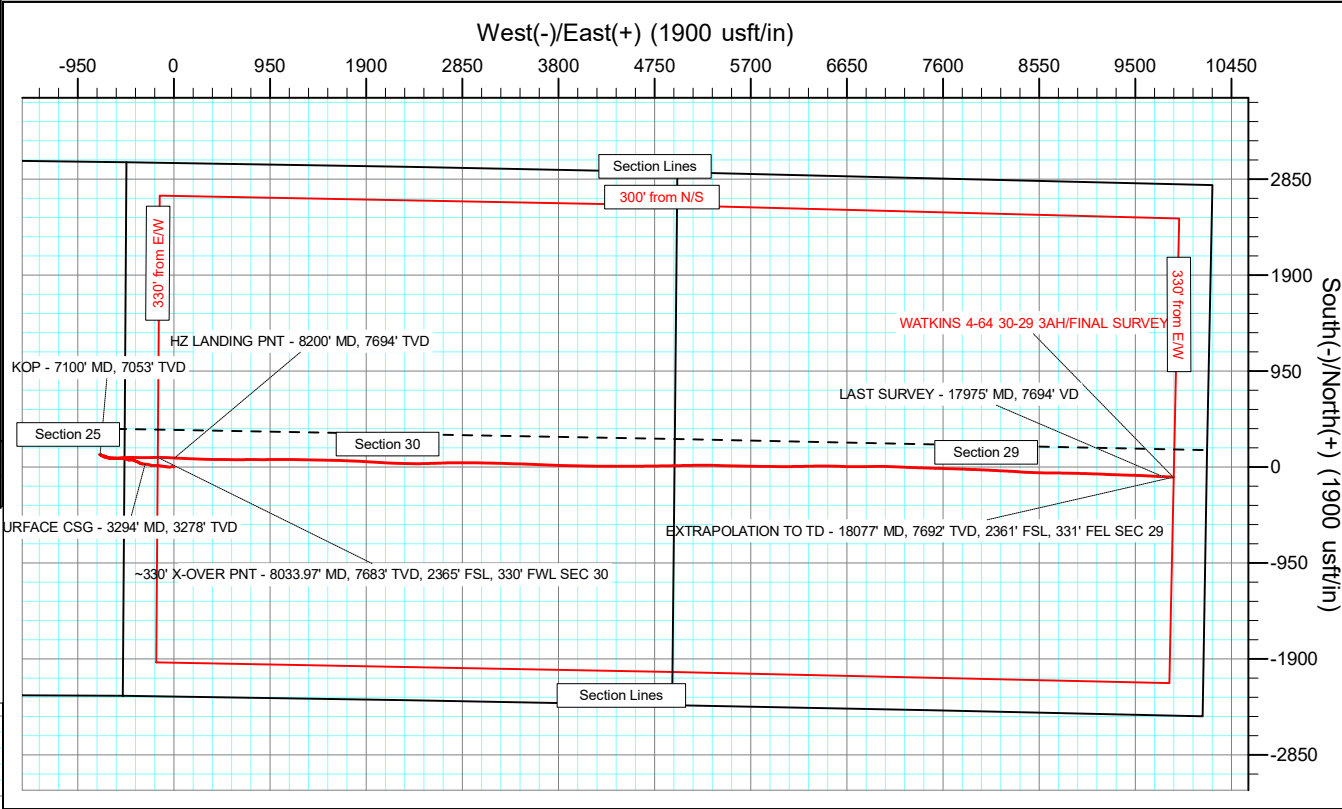
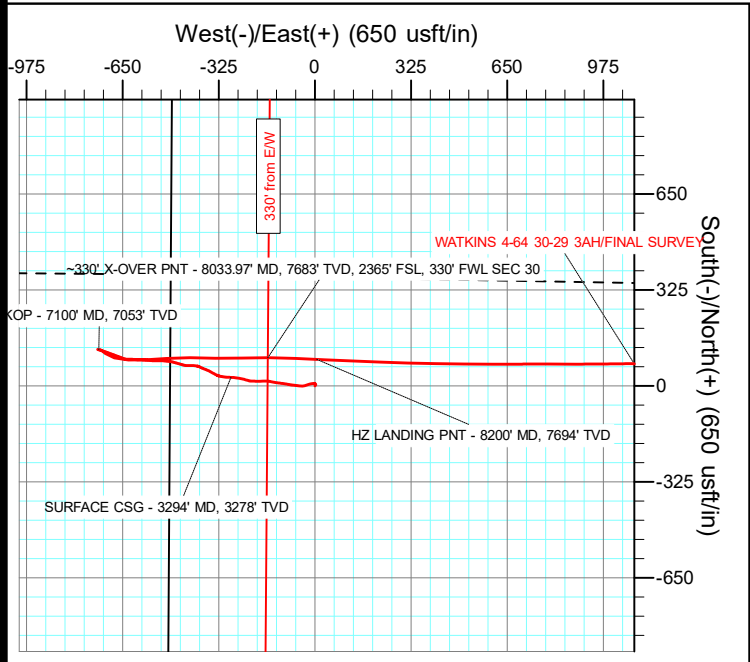


WELL DETAILS: WATKINS 4-64 30-29 3AH

5767.00						Slot
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1671437.26	3252836.56	39.673462°N	104.601774°W	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
3294.00	4.98	271.70	3277.89	28.78	-284.23	-284.51	298.69	SURFACE CSG - 3294' MD, 3278' TVD
7100.00	8.64	98.85	7053.35	123.66	-730.43	-731.64	780.36	KOP - 7100' MD, 7053' TVD
8033.97	79.82	90.46	7683.42	95.71	-159.04	-160.00	1362.39	~330' X-OVER PNT - 8033.97' MD, 7683' TVD, 2365' FSL, 330' FWL SEC 30
8200.00	89.27	92.41	7693.56	89.48	6.29	5.39	1527.83	HZ LANDING PNT - 8200' MD, 7694' TVD
17975.00	90.94	92.76	7693.72	-95.28	9772.44	9772.90	11298.26	LAST SURVEY - 17975' MD, 7694' VD
18077.00	90.94	92.76	7692.04	-100.19	9874.31	9874.81	11400.24	EXTRAPOLATION TO TD - 18077' MD, 7692' TVD, 2361' FSL, 331' FEL SEC 29



Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 3AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5792.00usft
Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5792.00usft
Well:	WATKINS 4-64 30-29 3AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDM

Project	ARAPAHOE COUNTY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		SEC 30-T4S-R64W			
Site Position:		Northing:	1,669,168.52 usft	Latitude:	39.667247°N
From:	Lat/Long	Easting:	3,252,354.22 usft	Longitude:	104.603567°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.57 °

Well	WATKINS 4-64 30-29 3AH					
Well Position	+N/-S	0.00 usft	Northing:	1,671,437.26 usft	Latitude:	39.673462°N
	+E/-W	0.00 usft	Easting:	3,252,836.56 usft	Longitude:	104.601774°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,767.00 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/11/2024	7.42	65.99	51,309.71965445

Design	FINAL SURVEY				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	90.58	

Survey Program	Date	1/17/2024			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
242.00	3,227.00	SURFACE SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard	
3,367.00	18,077.00	FINAL SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
242.00	1.02	40.05	241.99	1.65	1.39	1.37	0.42	0.42	0.00	
333.00	1.15	41.11	332.97	2.96	2.51	2.48	0.14	0.14	1.16	
424.00	1.77	341.78	423.95	4.98	2.67	2.62	1.69	0.68	-65.20	
515.00	2.17	306.17	514.89	7.33	0.84	0.76	1.39	0.44	-39.13	
610.00	3.09	263.21	609.80	8.09	-3.16	-3.24	2.22	0.97	-45.22	
704.00	3.98	265.19	703.62	7.52	-8.92	-9.00	0.96	0.95	2.11	
798.00	4.91	254.48	797.34	6.17	-16.05	-16.11	1.32	0.99	-11.39	
893.00	3.67	254.53	892.07	4.27	-22.90	-22.94	1.31	-1.31	0.05	
988.00	3.67	251.66	986.88	2.50	-28.71	-28.74	0.19	0.00	-3.02	

Civitas Resources

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Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5792.00usft
Well:	WATKINS 4-64 30-29 3AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,082.00	3.76	252.32	1,080.68	0.62	-34.51	-34.51	0.11	0.10	0.70
1,176.00	5.70	268.98	1,174.36	-0.40	-42.11	-42.11	2.51	2.06	17.72
1,271.00	6.81	275.77	1,268.79	0.08	-52.43	-52.43	1.40	1.17	7.15
1,365.00	7.47	276.47	1,362.06	1.33	-64.05	-64.06	0.71	0.70	0.74
1,460.00	8.44	276.65	1,456.15	2.83	-77.11	-77.14	1.02	1.02	0.19
1,554.00	7.29	281.85	1,549.26	4.86	-89.80	-89.84	1.44	-1.22	5.53
1,649.00	7.07	278.37	1,643.52	6.95	-101.48	-101.55	0.51	-0.23	-3.66
1,744.00	7.64	278.10	1,737.74	8.69	-113.52	-113.60	0.60	0.60	-0.28
1,838.00	7.95	276.74	1,830.87	10.33	-126.16	-126.26	0.38	0.33	-1.45
1,933.00	7.87	282.11	1,924.97	12.47	-139.04	-139.16	0.78	-0.08	5.65
2,028.00	8.18	280.66	2,019.04	15.08	-152.05	-152.19	0.39	0.33	-1.53
2,123.00	6.76	269.69	2,113.23	16.30	-164.28	-164.44	2.11	-1.49	-11.55
2,217.00	6.63	267.61	2,206.59	16.04	-175.23	-175.39	0.29	-0.14	-2.21
2,312.00	6.58	264.62	2,300.96	15.30	-186.13	-186.28	0.37	-0.05	-3.15
2,407.00	6.05	275.77	2,395.39	15.30	-196.53	-196.68	1.40	-0.56	11.74
2,502.00	5.74	273.52	2,489.89	16.09	-206.26	-206.41	0.41	-0.33	-2.37
2,597.00	5.79	269.51	2,584.41	16.34	-215.79	-215.94	0.43	0.05	-4.22
2,692.00	6.27	287.89	2,678.89	17.90	-225.52	-225.69	2.08	0.51	19.35
2,786.00	5.88	286.26	2,772.36	20.82	-235.03	-235.23	0.45	-0.41	-1.73
2,881.00	6.05	282.64	2,866.85	23.28	-244.58	-244.81	0.43	0.18	-3.81
2,976.00	5.88	280.70	2,961.33	25.28	-254.25	-254.49	0.28	-0.18	-2.04
3,071.00	5.66	278.46	3,055.85	26.87	-263.66	-263.92	0.33	-0.23	-2.36
3,165.00	5.35	276.74	3,149.42	28.07	-272.60	-272.87	0.37	-0.33	-1.83
3,227.00	5.21	272.86	3,211.15	28.55	-278.28	-278.56	0.62	-0.23	-6.26
3,294.00	4.98	271.70	3,277.89	28.78	-284.23	-284.51	0.38	-0.34	-1.74
SURFACE CSG - 3294' MD, 3278' TVD									
3,367.00	4.73	270.30	3,350.63	28.89	-290.40	-290.68	0.38	-0.34	-1.91
3,557.00	6.81	279.07	3,539.66	30.71	-309.36	-309.66	1.19	1.09	4.62
3,652.00	5.88	277.93	3,634.08	32.27	-319.75	-320.06	0.99	-0.98	-1.20
3,747.00	9.15	295.77	3,728.26	36.23	-331.37	-331.72	4.19	3.44	18.78
3,841.00	8.44	298.77	3,821.15	42.80	-344.15	-344.57	0.90	-0.76	3.19
3,936.00	7.82	299.08	3,915.20	49.29	-355.91	-356.39	0.65	-0.65	0.33
4,031.00	7.95	290.62	4,009.30	54.75	-367.71	-368.24	1.23	0.14	-8.91
4,149.00	6.58	293.57	4,126.35	60.33	-381.54	-382.13	1.20	-1.16	2.50
4,243.00	5.66	297.80	4,219.82	64.64	-390.58	-391.21	1.09	-0.98	4.50
4,338.00	6.81	276.87	4,314.27	67.50	-400.32	-400.98	2.66	1.21	-22.03
4,433.00	5.70	276.87	4,408.70	68.74	-410.59	-411.27	1.17	-1.17	0.00
4,528.00	7.91	267.26	4,503.03	68.99	-421.81	-422.49	2.61	2.33	-10.12
4,623.00	6.58	270.88	4,597.27	68.76	-433.78	-434.46	1.48	-1.40	3.81
4,718.00	6.23	287.49	4,691.68	70.40	-444.14	-444.83	1.98	-0.37	17.48
4,813.00	8.84	285.29	4,785.85	73.87	-456.10	-456.83	2.76	2.75	-2.32
4,908.00	7.56	286.30	4,879.88	77.55	-469.14	-469.90	1.36	-1.35	1.06
5,003.00	6.05	285.86	4,974.21	80.67	-479.95	-480.75	1.59	-1.59	-0.46

Civitas Resources

Survey Report

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Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5792.00usft
Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5792.00usft
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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,097.00	7.82	274.89	5,067.52	82.57	-491.09	-491.90	2.34	1.88	-11.67
5,192.00	6.58	278.32	5,161.77	83.91	-502.92	-503.74	1.38	-1.31	3.61
5,287.00	8.00	272.99	5,256.00	85.04	-514.91	-515.74	1.65	1.49	-5.61
5,382.00	7.64	269.73	5,350.12	85.36	-527.82	-528.66	0.60	-0.38	-3.43
5,477.00	6.89	267.48	5,444.36	85.08	-539.83	-540.67	0.84	-0.79	-2.37
5,572.00	10.03	275.86	5,538.31	85.67	-553.76	-554.60	3.54	3.31	8.82
5,667.00	8.84	274.05	5,632.03	87.03	-569.27	-570.12	1.29	-1.25	-1.91
5,762.00	8.00	273.56	5,726.00	87.96	-583.15	-584.01	0.89	-0.88	-0.52
5,857.00	6.81	270.13	5,820.21	88.38	-595.38	-596.24	1.34	-1.25	-3.61
5,952.00	8.97	276.34	5,914.31	89.21	-608.37	-609.25	2.44	2.27	6.54
6,047.00	7.56	271.71	6,008.32	90.22	-621.98	-622.87	1.64	-1.48	-4.87
6,142.00	6.01	266.29	6,102.65	90.08	-633.19	-634.07	1.76	-1.63	-5.71
6,237.00	5.83	286.61	6,197.15	91.14	-642.78	-643.67	2.20	-0.19	21.39
6,331.00	7.16	291.28	6,290.55	94.63	-652.81	-653.74	1.52	1.41	4.97
6,426.00	6.10	289.87	6,384.91	98.49	-663.08	-664.04	1.13	-1.12	-1.48
6,520.00	8.22	291.50	6,478.17	102.65	-674.03	-675.04	2.27	2.26	1.73
6,615.00	7.07	289.78	6,572.33	107.12	-685.85	-686.90	1.23	-1.21	-1.81
6,709.00	8.31	290.49	6,665.48	111.46	-697.66	-698.75	1.32	1.32	0.76
6,804.00	7.11	288.77	6,759.62	115.75	-709.65	-710.79	1.29	-1.26	-1.81
6,898.00	8.57	286.74	6,852.74	119.64	-721.87	-723.05	1.58	1.55	-2.16
6,993.00	7.11	285.51	6,946.85	123.25	-734.31	-735.53	1.55	-1.54	-1.29
7,088.00	9.37	96.77	7,041.50	123.92	-732.29	-733.51	17.30	2.38	180.27
7,100.00	8.64	98.85	7,053.35	123.66	-730.43	-731.64	6.65	-6.07	17.34
KOP - 7100' MD, 7053' TVD									
7,184.00	4.29	132.37	7,136.82	120.57	-721.86	-723.05	6.65	-5.18	39.90
7,279.00	16.35	128.67	7,230.12	109.78	-708.75	-709.83	12.71	12.69	-3.89
7,374.00	26.91	108.44	7,318.42	94.57	-677.79	-678.71	13.46	11.12	-21.29
7,468.00	34.73	90.95	7,399.24	87.37	-630.67	-631.52	12.58	8.32	-18.61
7,563.00	42.95	86.94	7,473.19	88.65	-571.18	-572.05	9.04	8.65	-4.22
7,658.00	52.28	85.79	7,537.16	93.14	-501.23	-502.15	9.86	9.82	-1.21
7,753.00	60.54	90.82	7,589.69	95.32	-422.24	-423.18	9.75	8.69	5.29
7,849.00	66.42	91.39	7,632.54	93.65	-336.39	-337.32	6.15	6.12	0.59
7,943.00	74.99	87.78	7,663.58	94.36	-247.77	-248.72	9.81	9.12	-3.84
8,033.97	79.82	90.46	7,683.42	95.71	-159.04	-160.00	6.04	5.31	2.95
~330' X-OVER PNT - 8033.97' MD, 7683' TVD, 2365' FSL, 330' FWL SEC 30									
8,037.00	79.98	90.55	7,683.95	95.68	-156.06	-157.02	6.04	5.32	2.90
8,131.00	89.31	93.02	7,692.71	92.75	-62.62	-63.56	10.26	9.93	2.63
8,200.00	89.27	92.41	7,693.56	89.48	6.29	5.39	0.89	-0.05	-0.88
HZ LANDING PNT - 8200' MD, 7694' TVD									
8,226.00	89.26	92.18	7,693.90	88.44	32.27	31.37	0.89	-0.05	-0.88
8,320.00	87.89	92.58	7,696.23	84.54	126.16	125.29	1.52	-1.46	0.43
8,415.00	87.36	92.18	7,700.17	80.60	220.99	220.17	0.70	-0.56	-0.42
8,509.00	86.79	91.61	7,704.97	77.50	314.82	314.02	0.86	-0.61	-0.61
8,604.00	86.21	91.17	7,710.77	75.19	409.61	408.83	0.77	-0.61	-0.46

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8,699.00	85.64	90.46	7,717.52	73.85	504.36	503.59	0.96	-0.60	-0.75	
8,794.00	86.52	90.11	7,724.01	73.38	599.14	598.36	1.00	0.93	-0.37	
8,888.00	85.77	89.58	7,730.33	73.63	692.93	692.14	0.98	-0.80	-0.56	
8,983.00	88.11	90.24	7,735.40	73.78	787.78	786.99	2.56	2.46	0.69	
9,077.00	87.10	89.93	7,739.33	73.64	881.70	880.91	1.12	-1.07	-0.33	
9,173.00	86.39	89.41	7,744.78	74.19	977.54	976.74	0.92	-0.74	-0.54	
9,268.00	85.55	89.27	7,751.46	75.28	1,072.30	1,071.48	0.90	-0.88	-0.15	
9,363.00	87.19	91.57	7,757.47	74.58	1,167.10	1,166.28	2.97	1.73	2.42	
9,457.00	86.79	91.57	7,762.41	72.01	1,260.93	1,260.14	0.43	-0.43	0.00	
9,551.00	86.66	90.68	7,767.78	70.17	1,354.76	1,353.98	0.96	-0.14	-0.95	
9,647.00	86.66	90.99	7,773.37	68.77	1,450.59	1,449.81	0.32	0.00	0.32	
9,741.00	86.04	90.86	7,779.36	67.26	1,544.38	1,543.62	0.67	-0.66	-0.14	
9,836.00	87.94	92.27	7,784.35	64.67	1,639.21	1,638.47	2.49	2.00	1.48	
9,931.00	87.98	92.40	7,787.73	60.80	1,734.07	1,733.36	0.14	0.04	0.14	
10,026.00	87.80	92.40	7,791.23	56.82	1,828.92	1,828.25	0.19	-0.19	0.00	
10,121.00	90.15	93.64	7,792.93	51.82	1,923.77	1,923.14	2.80	2.47	1.31	
10,216.00	90.10	93.28	7,792.72	46.09	2,018.59	2,018.02	0.38	-0.05	-0.38	
10,310.00	90.81	93.33	7,791.97	40.67	2,112.43	2,111.91	0.76	0.76	0.05	
10,405.00	90.28	91.57	7,791.07	36.61	2,207.34	2,206.85	1.93	-0.56	-1.85	
10,499.00	91.83	91.83	7,789.34	33.82	2,301.28	2,300.82	1.67	1.65	0.28	
10,593.00	89.35	89.14	7,788.37	33.02	2,395.25	2,394.79	3.89	-2.64	-2.86	
10,688.00	89.57	88.75	7,789.26	34.77	2,490.23	2,489.75	0.47	0.23	-0.41	
10,781.00	89.70	88.08	7,789.86	37.35	2,583.19	2,582.68	0.73	0.14	-0.72	
10,875.00	89.44	87.69	7,790.56	40.81	2,677.13	2,676.58	0.50	-0.28	-0.41	
10,970.00	89.35	90.24	7,791.57	42.53	2,772.10	2,771.52	2.69	-0.09	2.68	
11,065.00	88.33	89.71	7,793.49	42.57	2,867.08	2,866.50	1.21	-1.07	-0.56	
11,160.00	90.94	91.43	7,794.09	41.63	2,962.06	2,961.48	3.29	2.75	1.81	
11,255.00	90.63	90.82	7,792.79	39.76	3,057.03	3,056.47	0.72	-0.33	-0.64	
11,348.00	89.84	90.77	7,792.41	38.47	3,150.02	3,149.47	0.85	-0.85	-0.05	
11,443.00	91.16	91.87	7,791.58	36.28	3,244.99	3,244.45	1.81	1.39	1.16	
11,537.00	90.59	91.79	7,790.15	33.28	3,338.93	3,338.42	0.61	-0.61	-0.09	
11,632.00	90.28	91.52	7,789.43	30.54	3,433.89	3,433.40	0.43	-0.33	-0.28	
11,727.00	92.49	92.40	7,787.13	27.29	3,528.80	3,528.34	2.50	2.33	0.93	
11,822.00	92.62	92.14	7,782.89	23.53	3,623.63	3,623.20	0.31	0.14	-0.27	
11,916.00	91.60	92.23	7,779.43	19.95	3,717.49	3,717.10	1.09	-1.09	0.10	
12,010.00	91.47	91.96	7,776.92	16.51	3,811.40	3,811.03	0.32	-0.14	-0.29	
12,105.00	91.43	91.39	7,774.51	13.74	3,906.33	3,905.99	0.60	-0.04	-0.60	
12,201.00	91.47	90.95	7,772.08	11.78	4,002.28	4,001.95	0.46	0.04	-0.46	
12,295.00	90.81	91.35	7,770.21	9.89	4,096.24	4,095.93	0.82	-0.70	0.43	
12,389.00	90.06	90.55	7,769.50	8.33	4,190.22	4,189.92	1.17	-0.80	-0.85	
12,484.00	90.50	90.16	7,769.03	7.75	4,285.22	4,284.92	0.62	0.46	-0.41	
12,578.00	91.30	89.89	7,767.56	7.70	4,379.20	4,378.90	0.90	0.85	-0.29	
12,674.00	92.49	89.63	7,764.38	8.11	4,475.15	4,474.84	1.27	1.24	-0.27	

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 3AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5792.00usft
Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5792.00usft
Well:	WATKINS 4-64 30-29 3AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,768.00	89.66	89.85	7,762.62	8.53	4,569.12	4,568.80	3.02	-3.01	0.23	
12,863.00	89.09	89.27	7,763.66	9.26	4,664.11	4,663.78	0.86	-0.60	-0.61	
12,957.00	90.50	89.27	7,763.99	10.46	4,758.10	4,757.75	1.50	1.50	0.00	
13,052.00	90.23	89.01	7,763.39	11.89	4,853.09	4,852.72	0.39	-0.28	-0.27	
13,146.00	90.68	89.14	7,762.64	13.40	4,947.07	4,946.68	0.50	0.48	0.14	
13,241.00	90.54	88.57	7,761.63	15.30	5,042.05	5,041.63	0.62	-0.15	-0.60	
13,336.00	91.87	89.63	7,759.63	16.79	5,137.01	5,136.58	1.79	1.40	1.12	
13,430.00	92.36	89.36	7,756.16	17.62	5,230.95	5,230.50	0.60	0.52	-0.29	
13,525.00	91.47	91.52	7,752.99	16.89	5,325.88	5,325.44	2.46	-0.94	2.27	
13,619.00	91.96	91.12	7,750.17	14.73	5,419.82	5,419.39	0.67	0.52	-0.43	
13,714.00	90.37	91.79	7,748.24	12.32	5,514.76	5,514.35	1.82	-1.67	0.71	
13,809.00	89.88	91.08	7,748.04	9.94	5,609.73	5,609.34	0.91	-0.52	-0.75	
13,903.00	89.84	91.12	7,748.27	8.13	5,703.71	5,703.34	0.06	-0.04	0.04	
13,998.00	89.75	90.82	7,748.61	6.52	5,798.70	5,798.33	0.33	-0.09	-0.32	
14,093.00	89.75	89.98	7,749.02	5.86	5,893.69	5,893.33	0.88	0.00	-0.88	
14,188.00	90.41	90.73	7,748.89	5.27	5,988.69	5,988.33	1.05	0.69	0.79	
14,282.00	90.28	89.54	7,748.32	5.05	6,082.69	6,082.32	1.27	-0.14	-1.27	
14,377.00	91.25	89.05	7,747.05	6.22	6,177.67	6,177.29	1.14	1.02	-0.52	
14,471.00	90.59	88.52	7,745.54	8.21	6,271.64	6,271.23	0.90	-0.70	-0.56	
14,566.00	89.97	90.20	7,745.08	9.27	6,366.63	6,366.20	1.88	-0.65	1.77	
14,660.00	89.53	89.49	7,745.49	9.53	6,460.62	6,460.19	0.89	-0.47	-0.76	
14,755.00	88.91	92.40	7,746.78	7.96	6,555.59	6,555.17	3.13	-0.65	3.06	
14,850.00	91.16	90.90	7,746.72	5.23	6,650.54	6,650.15	2.85	2.37	-1.58	
14,944.00	91.47	90.46	7,744.57	4.11	6,744.51	6,744.12	0.57	0.33	-0.47	
15,039.00	90.81	89.05	7,742.68	4.52	6,839.49	6,839.09	1.64	-0.69	-1.48	
15,134.00	89.70	88.97	7,742.25	6.16	6,934.47	6,934.05	1.17	-1.17	-0.08	
15,229.00	90.37	91.65	7,742.20	5.64	7,029.46	7,029.04	2.91	0.71	2.82	
15,324.00	92.36	92.49	7,739.93	2.21	7,124.37	7,123.98	2.27	2.09	0.88	
15,419.00	93.15	92.23	7,735.37	-1.69	7,219.18	7,218.82	0.88	0.83	-0.27	
15,513.00	91.69	92.01	7,731.40	-5.17	7,313.02	7,312.70	1.57	-1.55	-0.23	
15,608.00	92.36	91.65	7,728.04	-8.20	7,407.92	7,407.62	0.80	0.71	-0.38	
15,703.00	91.43	91.96	7,724.90	-11.19	7,502.82	7,502.54	1.03	-0.98	0.33	
15,798.00	91.65	91.57	7,722.35	-14.11	7,597.74	7,597.49	0.47	0.23	-0.41	
15,892.00	91.96	91.57	7,719.39	-16.69	7,691.65	7,691.43	0.33	0.33	0.00	
15,986.00	90.19	92.45	7,717.62	-19.99	7,785.58	7,785.38	2.10	-1.88	0.94	
16,080.00	90.90	91.96	7,716.73	-23.60	7,879.50	7,879.33	0.92	0.76	-0.52	
16,175.00	91.43	92.27	7,714.80	-27.11	7,974.42	7,974.28	0.65	0.56	0.33	
16,270.00	89.04	92.98	7,714.41	-31.46	8,069.31	8,069.21	2.62	-2.52	0.75	
16,366.00	89.35	93.11	7,715.76	-36.56	8,165.16	8,165.11	0.35	0.32	0.14	
16,460.00	88.73	92.53	7,717.33	-41.18	8,259.04	8,259.03	0.90	-0.66	-0.62	
16,554.00	90.37	94.87	7,718.07	-47.25	8,352.83	8,352.88	3.04	1.74	2.49	
16,648.00	91.03	92.01	7,716.92	-52.89	8,446.64	8,446.74	3.12	0.70	-3.04	
16,743.00	90.99	91.83	7,715.25	-56.07	8,541.57	8,541.70	0.19	-0.04	-0.19	
16,838.00	90.81	91.17	7,713.75	-58.55	8,636.53	8,636.68	0.72	-0.19	-0.69	

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 3AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5792.00usft
Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5792.00usft
Well:	WATKINS 4-64 30-29 3AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,933.00	89.88	89.71	7,713.18	-59.28	8,731.52	8,731.67	1.82	-0.98	-1.54
17,027.00	89.66	91.35	7,713.56	-60.15	8,825.51	8,825.67	1.76	-0.23	1.74
17,122.00	89.44	91.26	7,714.31	-62.32	8,920.48	8,920.66	0.25	-0.23	-0.09
17,217.00	90.63	91.96	7,714.25	-64.99	9,015.44	9,015.64	1.45	1.25	0.74
17,312.00	90.99	92.40	7,712.90	-68.60	9,110.36	9,110.59	0.60	0.38	0.46
17,407.00	90.46	92.40	7,711.70	-72.58	9,205.27	9,205.54	0.56	-0.56	0.00
17,502.00	92.53	91.87	7,709.22	-76.12	9,300.17	9,300.46	2.25	2.18	-0.56
17,597.00	92.67	91.83	7,704.91	-79.18	9,395.02	9,395.34	0.15	0.15	-0.04
17,691.00	93.15	91.17	7,700.14	-81.64	9,488.87	9,489.21	0.87	0.51	-0.70
17,786.00	90.63	93.15	7,697.01	-85.22	9,583.74	9,584.11	3.37	-2.65	2.08
17,880.00	91.21	93.15	7,695.50	-90.38	9,677.58	9,678.00	0.62	0.62	0.00
17,975.00	90.94	92.76	7,693.72	-95.28	9,772.44	9,772.90	0.50	-0.28	-0.41
LAST SURVEY - 17975' MD, 7694' VD									
18,077.00	90.94	92.76	7,692.04	-100.19	9,874.31	9,874.82	0.00	0.00	0.00
EXTRAPOLATION TO TD - 18077' MD, 7692' TVD, 2361' FSL, 331' FEL SEC 29									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL-WATKINS 4-64 3A	0.00	0.00	7,675.00	-81.14	9,875.09	1,671,453.76	3,262,711.83	39.673234°N	104.566693°W
- actual wellpath misses target center by 25.57usft at 18077.00usft MD (7692.04 TVD, -100.19 N, 9874.31 E)									
- Point									
LP-WATKINS 4-64 3AH	0.00	0.00	7,800.00	110.75	-159.04	1,671,546.43	3,252,676.44	39.673766°N	104.602339°W
- actual wellpath misses target center by 116.26usft at 8044.40usft MD (7685.19 TVD, 95.60 N, -148.76 E)									
- Point									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
3,294.00	3,277.89	28.78	-284.23	SURFACE CSG - 3294' MD, 3278' TVD	
7,100.00	7,053.35	123.66	-730.43	KOP - 7100' MD, 7053' TVD	
8,033.97	7,683.42	95.71	-159.04	~330' X-OVER PNT - 8033.97' MD, 7683' TVD, 2365' FSL, 330' FWL SEC 30	
8,200.00	7,693.56	89.48	6.29	HZ LANDING PNT - 8200' MD, 7694' TVD	
17,975.00	7,693.72	-95.28	9,772.44	LAST SURVEY - 17975' MD, 7694' VD	
18,077.00	7,692.04	-100.19	9,874.31	EXTRAPOLATION TO TD - 18077' MD, 7692' TVD, 2361' FSL, 331' FEL SEC 2	

Checked By: _____ Approved By: _____ Date: _____